

REMARKS

Claims 1-18 are now pending in this application. Claims 1-14, 17, and 18 stand rejected. Claims 15 and 16 stand objected to.

The rejection of Claims 1, 4, 8, 10, 11, and 14 under 35 U.S.C. 102(b) as being clearly anticipated by Cunningham (US 3885176) is respectfully traversed.

Cunningham describes a dynamoelectric machine with improved bearing lubrication system including a shaft (18), a rotor (17) mounted on the shaft (18), a bearing system (19), and a lubrication system for the bearing means including a lubricant reservoir (66) with lubricant retaining material disposed therein. Cunningham also describes a feed wick (42) for transferring lubricant from the lubricant reservoir (66) to the bearing surface and rubbing sealings (61, 62) cooperating with a raised portion of the lubricant reservoir (66) defining an end cap (31). The rubbing sealings (61, 62) are arranged to prevent movement of contaminants into the lubrication system.

Claim 1 recites a method of shielding a condenser fan motor from contaminants, the condenser fan motor including a housing and an output shaft, the method utilizing a dust shield including a shroud, a center opening through the shroud, and a hub extending around a perimeter of the opening, wherein the hub includes a spring member, the method including “the steps of fitting the opening of the shroud over the output shaft...inserting the output shaft through the opening...engaging the hub to the output shaft, wherein the spring member expands the hub outward as the hub receives the output shaft thereby forming an interference fit between the hub and the output shaft...positioning the dust shield adjacent the housing such that the shroud defines an enclosure to encompass a part of the housing to prevent contaminants from reaching a portion of the output shaft adjacent the housing.”

Cunningham does not describe or suggest a method of shielding a condenser fan motor from contaminants as recited in Claim 1. Specifically, Cunningham does not describe or suggest a hub including a spring member. More specifically, Cunningham does not describe or suggest engaging the hub to an output shaft, wherein the spring member expands the hub outward as the

hub receives the output shaft thereby forming an interference fit between the hub and the output shaft. Rather, Cunningham merely describes a rubbing seal and an end cap. The rubbing seal engages a shaft. In order to prolong the life of the rubbing seal, lubricant may be placed between the seal and the face of the end cap. Notably, Cunningham does not describe or suggest a spring member which expands a hub outward as the hub receives an output shaft thereby forming an interference fit between the hub and the shaft. Accordingly, for at least the reasons set forth above, Claim 1 is respectfully submitted to be patentable over Cunningham.

Claim 4 recites a condenser fan motor dust shield for shielding a condenser fan motor from contaminants wherein the condenser fan motor has an output shaft, the condenser fan motor dust shield including “a shroud...a central opening through said shroud and configured to receive the output shaft...a hub extending from said shroud and adapted to obstruct at least a portion of said opening, said hub comprising a spring member configured to allow said hub to expand, wherein said hub is configured to expand when the output shaft is received in said central opening.”

Cunningham does not describe or suggest a condenser fan motor dust shield as recited in Claim 4. More specifically, Cunningham does not describe or suggest a hub including a spring member configured to allow the hub to expand, wherein the hub is configured to expand when an output shaft is received in a central opening. Rather, Cunningham merely describes a rubbing seal and an end cap. The rubbing seal engages a shaft. In order to prolong the life of the rubbing seal, lubricant may be placed between the seal and the face of the end cap. Notably, Cunningham does not describe or suggest a spring member configured to allow a hub to expand when the output shaft is received in the central opening. Accordingly, for at least the reasons set forth above, Claim 4 is respectfully submitted to be patentable over Cunningham.

Claims 8 and 10 depend from independent Claim 4. When the recitations of Claims 8 and 10 are considered in combination with the recitations of Claim 4, Applicants submit that the dependent claims 8 and 10 likewise are patentable over Cunningham.

Claim 11 recites a shielded condenser fan motor assembly including “a motor comprising a housing and an output shaft...a dust shield attached to said shaft, said dust shield comprising a shroud, and a hub extending from said shroud, said hub comprising a spring member configured

to allow said hub to expand around said shaft, wherein said shroud forms an enclosure which encloses an area of said housing and said shaft.”

Cunningham does not describe or suggest a condenser fan motor dust shield as recited in Claim 11. More specifically, Cunningham does not describe or suggest a shroud and a hub including a spring member configured to allow the hub to expand around a shaft, wherein the shroud forms an enclosure which encloses an area of a housing and a shaft. Rather, Cunningham merely describes a rubbing seal and an end cap. The rubbing seal engages a shaft. In order to prolong the life of the rubbing seal, lubricant may be placed between the seal and the face of the end cap. Notably, Cunningham does not describe or suggest a spring member configured to allow a hub to expand around the shaft. Accordingly, for at least the reasons set forth above, Claim 11 is respectfully submitted to be patentable over Cunningham.

Claim 14 depends from independent Claim 11. When the recitations of Claim 14 are considered in combination with the recitations of Claim 11, Applicants submit that the dependent claim 14 likewise is patentable over Cunningham.

The rejection of Claims 1, 4, 5, and 8-10 under 35 U.S.C. 102(b) as being clearly anticipated by Else (US 1992818) is respectfully traversed.

Else describes a high-speed bearing structure provided with a housing (1) constituting a main oil reservoir chamber (34) and with an auxiliary chamber (43) adjacent to a shaft, an inverted cup member (29) adapted to be threaded on the same threads of the shaft (6) which are utilized in connection with a nut (27), and a down-turned flange (32) of the cup member (29) constitutes, with an upturned flange (33) of a resilient cap (4), a baffle which prevents excess oil from passing out of the motor and also prevents dust and dirt from getting into it.

Claim 1 is recited above.

Else does not describe or suggest a method of shielding a condenser fan motor from contaminants as recited in Claim 1. Specifically, Else does not describe or suggest a hub including a spring member. More specifically, Else does not describe or suggest engaging the hub to an output shaft, wherein the spring member expands the hub outward as the hub receives the output shaft thereby forming an interference fit between the hub and the output shaft. Rather,

Else merely describes an inverted cup member threaded onto a shaft, wherein the cup member includes a down turned flange which creates a baffle. Notably, Else does not describe or suggest a spring member expands the hub outward as the hub receives the output shaft thereby forming an interference fit between the hub and the output shaft. Accordingly, for at least the reasons set forth above, Claim 1 is respectfully submitted to be patentable over Else.

Claim 4 is recited above.

Else does not describe or suggest a condenser fan motor dust shield as recited in Claim 4. Specifically, Else does not describe or suggest a hub including a spring member. More specifically, Else does not describe or suggest Rather, Else merely describes an inverted cup member threaded onto a shaft, wherein the cup member includes a down turned flange which creates a baffle. Notably, Else does not describe or suggest a spring member configured to allow a hub to expand when the output shaft is received in the central opening. Accordingly, for at least the reasons set forth above, Claim 4 is respectfully submitted to be patentable over Else.

Claims 5, 8-10 depend from independent Claim 4. When the recitations of Claims 5, 8-10 are considered in combination with the recitations of Claim 4, Applicants submit that the dependent claims 5, 8-10 likewise are patentable over Else.

The rejection of Claims 2, 5, 9, 13, and 17 under 35 U.S.C. 103 (a) as being unpatentable over Cunningham, in further view of Otto (US 4287662) is respectfully traversed.

Cunningham is recited above. Otto describes a method of assembling a device (11) having a sleeve section (13) integral with a pair of opposite annular slingers (15, 17) in a preselected assembly position onto a rotatable shaft (19) of a prime mover (21) and with respect to an end plate (23) of the prime mover and an opening (25) in the end plate (23) through which the shaft (19) extends so as to preclude contamination of a lubricant in a lubricating system (29) of the prime mover (21) communicated with the opening (25) in the event the prime mover is operated in an environment in which a fluid incompatible with the lubricant may be presented to at least one of the end plate (23) and an exterior end section (33) on the shaft (19) extending beyond the opening (25). The method includes arranging the sleeve section (13) in gripping engagement about the exterior end section of the shaft and moving the device (11) on the exterior

section toward the opening in the end plate (23). The method also includes inserting the sleeve section (13) into the opening (25) and locating one of the slingers (15, 17) over the opening (25) and with respect to a raised part of the end plate disposed about the opening, and predetermining the position of the other slinger on the shaft (19) with respect to the opening (25) and the lubrication system (29) so that the other slinger is disposed in lubricant slinging relation with respect to a part of the lubrication system (29) when the one slinger is located with respect to the raised part of the end plate during the inserting and locating step.

Applicant respectfully submits that the Section 103 rejection of the presently pending claims is not a proper rejection. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. Neither Cunningham nor Otto, considered alone or in combination, describes nor suggests the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicant respectfully submits that it would not be obvious to one skilled in the art to combine Cunningham with Otto, because there is no motivation to combine the references suggested in the art. Additionally, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicant's own teaching. Rather, only the conclusory statement that "[i]t would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Cunningham with the hub tapered and stretching around the shaft to grippingly engage the shaft as taught by Otto." suggests combining the disclosures.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicant's disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant's disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection is based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Since there is no teaching nor suggestion in the cited art for the combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicant requests that the Section 103 rejection be withdrawn.

Further, and to the extent understood, neither Cunningham nor Otto, considered alone or in combination, describe or suggest the claimed combination, and as such, the presently pending claims are patentably distinguishable from the cited combination. Specifically, Claim 1 recites a method of shielding a condenser fan motor from contaminants, the condenser fan motor including a housing and an output shaft, the method utilizing a dust shield including a shroud, a center opening through the shroud, and a hub extending around a perimeter of the opening, wherein the hub includes a spring member, the method including "the steps of fitting the opening of the shroud over the output shaft...inserting the output shaft through the opening...engaging the hub to the output shaft, wherein the spring member expands the hub outward as the hub receives the output shaft thereby forming an interference fit between the hub and the output shaft...positioning the dust shield adjacent the housing such that the shroud defines an enclosure to encompass a part of the housing to prevent contaminants from reaching a portion of the output shaft adjacent the housing."

Neither Cunningham nor Otto, considered alone or in combination, describes nor suggests a method of shielding a condenser fan motor from contaminants as recited in Claim 1. Specifically, neither Cunningham nor Otto, considered alone or in combination, describes nor suggests a hub including a spring member. More specifically, neither Cunningham nor Otto, considered alone or

in combination, describes nor suggests engaging the hub to an output shaft, wherein the spring member expands the hub outward as the hub receives the output shaft thereby forming an interference fit between the hub and the output shaft. Rather, Cunningham merely describes a rubbing seal and an end cap. The rubbing seal engages a shaft. In order to prolong the life of the rubbing seal, lubricant may be placed between the seal and the face of the end cap. Otto merely describes a device mounted to a shaft to preclude contamination of a lubricant in a lubrication system for the shaft, wherein the device includes a sleeve section extending axially from a flange. Notably, neither Cunningham nor Otto describes or suggests a spring member expands a hub outward as the hub receives an output shaft thereby forming an interference fit between the hub and the shaft. Accordingly, for at least the reasons set forth above, Claim 1 is respectfully submitted to be patentable over Cunningham, in further view of Otto.

Claim 2 depends from independent Claim 1. When the recitations of Claim 2 are considered in combination with the recitations of Claim 1, Applicants submit that the dependent claim 2 likewise is patentable over Cunningham, in further view of Otto.

Claim 4 recites a condenser fan motor dust shield for shielding a condenser fan motor from contaminants wherein the condenser fan motor has an output shaft, the condenser fan motor dust shield including “a shroud...a central opening through said shroud and configured to receive the output shaft...a hub extending from said shroud and adapted to obstruct at least a portion of said opening, said hub comprising a spring member configured to allow said hub to expand, wherein said hub is configured to expand when the output shaft is received in said central opening.”

Neither Cunningham nor Otto, consider alone or in combination, describes nor suggests a condenser fan motor dust shield as recited in Claim 4. More specifically, neither Cunningham nor Otto, consider alone or in combination, describes nor suggests a hub including a spring member configured to allow the hub to expand, wherein the hub is configured to expand when an output shaft is received in a central opening. Rather, Cunningham merely describes a rubbing seal and an end cap. The rubbing seal engages a shaft. In order to prolong the life of the rubbing seal, lubricant may be placed between the seal and the face of the end cap. Otto merely describes a device mounted to a shaft to preclude contamination of a lubricant in a lubrication system for

the shaft, wherein the device includes a sleeve section extending axially from a flange. Notably, neither Cunningham nor Otto describes or suggests a spring member configured to allow a hub to expand when the output shaft is received in the central opening. Accordingly, for at least the reasons set forth above, Claim 4 is respectfully submitted to be patentable over Cunningham, in further view of Otto.

Claims 5 and 9 depend from independent Claim 4. When the recitations of Claim 5 and 9 are considered in combination with the recitations of Claim 4, Applicants submit that the dependent claims 5 and 9 likewise are patentable over Cunningham, in further view of Otto.

Claim 11 recites a shielded condenser fan motor assembly including “a motor comprising a housing and an output shaft...a dust shield attached to said shaft, said dust shield comprising a shroud, and a hub extending from said shroud, said hub comprising a spring member configured to allow said hub to expand around said shaft, wherein said shroud forms an enclosure which encloses an area of said housing and said shaft.”

Neither Cunningham nor Otto, consider alone or in combination, describes nor suggests a condenser fan motor dust shield as recited in Claim 11. More specifically, neither Cunningham nor Otto, consider alone or in combination, describes nor suggests a hub including a spring member configured to allow the hub to expand around an output shaft. Rather, Cunningham merely describes a rubbing seal and an end cap. The rubbing seal engages a shaft. In order to prolong the life of the rubbing seal, lubricant may be placed between the seal and the face of the end cap. Otto merely describes a device mounted to a shaft to preclude contamination of a lubricant in a lubrication system for the shaft, wherein the device includes a sleeve section extending axially from a flange. Notably, neither Cunningham nor Otto describes or suggests a spring member configured to allow the hub to expand around the shaft. Accordingly, for at least the reasons set forth above, Claim 11 is respectfully submitted to be patentable over Cunningham, in further view of Otto.

Claims 13 and 17 depend from independent Claim 11. When the recitations of Claims 13 and 17 are considered in combination with the recitations of Claim 11, Applicants submit that the dependent claims 13 and 17 likewise are patentable over Cunningham, in further view of Otto.

The rejection of Claims 3, 6, 7, 12, and 17 under 35 U.S.C. 103 (a) as being unpatentable over Cunningham, in further view of Braun (US 6384501) is respectfully traversed.

Cunningham is recited above. Braun describes a self-centering timing disk hub with a timing disk support surface (1a) and a tubular hub sleeve (1b), wherein the end of the hub sleeve (1b) can be pushed onto a motor shaft (1d) so as to provide in the hub sleeve (1b) a contact surface between the inner wall surface of the hub sleeve (1b) and the motor shaft (1d). The hub sleeve (1b) is slotted at least in the region of the motor shaft (1d) and a clamping element (2) is movably arranged on the an outer wall surface at the sleeve end.

Claim 1 is recited above.

Neither Cunningham nor Braun, consider alone or in combination, describes nor suggests a method of shielding a condenser fan motor from contaminants as recited in Claim 1. Specifically, neither Cunningham nor Braun, consider alone or in combination, describes or suggests a hub including a spring member. More specifically, neither Cunningham nor Braun, consider alone or in combination, describes nor suggests engaging the hub to an output shaft, wherein the spring member expands the hub outward as the hub receives the output shaft thereby forming an interference fit between the hub and the output shaft. Rather, Cunningham merely describes a rubbing seal and an end cap. The rubbing seal engages a shaft. In order to prolong the life of the rubbing seal, lubricant may be placed between the seal and the face of the end cap. Braun describes a self-centering timing disk hub with a timing disk support surface and a tubular hub sleeve, wherein the end of the hub sleeve can be pushed onto a motor shaft with a clamping element. Notably, neither Cunningham nor Braun describes or suggests a spring member expands a hub outward as the hub receives an output shaft thereby forming an interference fit between the hub and the shaft. Accordingly, for at least the reasons set forth above, Claim 1 is respectfully submitted to be patentable over Cunningham, in further view of Braun.

Claim 3 depends from independent Claim 1. When the recitations of Claim 3 are considered in combination with the recitations of Claim 1, Applicants submit that the dependent claim 3 likewise is patentable over Cunningham, in further view of Braun.

Claim 4 is recited above.

Neither Cunningham nor Braun, consider alone or in combination, describes nor suggests a condenser fan motor dust shield as recited in Claim 4. More specifically, neither Cunningham nor Braun, consider alone or in combination, describes nor suggests a hub including a spring member configured to allow the hub to expand, wherein the hub is configured to expand when an output shaft is received in a central opening. Rather, Cunningham merely describes a rubbing seal and an end cap. The rubbing seal engages a shaft. In order to prolong the life of the rubbing seal, lubricant may be placed between the seal and the face of the end cap. Braun describes a self-centering timing disk hub with a timing disk support surface and a tubular hub sleeve, wherein the end of the hub sleeve can be pushed onto a motor shaft with a clamping element. Notably, neither Cunningham nor Braun describes or suggests a spring member configured to allow a hub to expand when the output shaft is received in the central opening. Accordingly, for at least the reasons set forth above, Claim 4 is respectfully submitted to be patentable over Cunningham, in further view of Braun.

Claims 6 and 7 depend from independent Claim 4. When the recitations of Claims 6 and 7 are considered in combination with the recitations of Claim 4, Applicants submit that the dependent claims 6 and 7 likewise are patentable over Cunningham, in further view of Braun.

Claim 11 is recited above.

Neither Cunningham nor Braun, consider alone or in combination, describes nor suggests a condenser fan motor dust shield as recited in Claim 11. More specifically, neither Cunningham nor Braun, consider alone or in combination, describes nor suggests a hub including a spring member configured to allow the hub to expand around an output shaft. Rather, Cunningham merely describes a rubbing seal and an end cap. The rubbing seal engages a shaft. In order to prolong the life of the rubbing seal, lubricant may be placed between the seal and the face of the end cap. Braun describes a self-centering timing disk hub with a timing disk support surface and a tubular hub sleeve, wherein the end of the hub sleeve can be pushed onto a motor shaft with a clamping element. Notably, neither Cunningham nor Braun describes or suggests a spring member configured to allow the hub to expand around the shaft. Accordingly, for at least the

reasons set forth above, Claim 11 is respectfully submitted to be patentable over Cunningham, in further view of Braun.

Claims 12 and 17 depend from independent Claim 11. When the recitations of Claims 12 and 17 are considered in combination with the recitations of Claim 11, Applicants submit that the dependent claims 12 and 17 likewise are patentable over Cunningham, in further view of Braun.

The rejection of Claim 18 under 35 U.S.C. 103 (a) as being unpatentable over Cunningham, in further view of Lakin (US 4800309) is respectfully traversed.

Cunningham is recited above. Lakin describes a self-aligning bearing and end shield mount (10) including a bearing (30), a spring (32), a thrust plate (34), a spacer (36), and an oil cap (38). The bearing (30) has a spherical surface portion (40) and a cylindrical portion (42) with an axial hole (44) through which a rotor shaft extends. The cylindrical end portion (42) of the bearing extends within a hub (52) of the spring just past the end of the hub. The spring (32) has an outer ring (54) that concentrically surrounds the hub (52), a bearing seat, and has an annular shoulder (56) defines a thrust plate seat. The bearing (30) is seated in a bearing socket (50) in the end shield of the motor housing and in the bearing seat of the spring. A thrust plate (34) is seated within the thrust plate seat of the spring (32) with the thrust surface of the spacer running against a surface portion of the thrust plate (34).

Claim 11 is recited above.

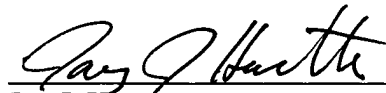
Neither Cunningham nor Lakin, consider alone or in combination, describes nor suggests a condenser fan motor dust shield as recited in Claim 11. More specifically, neither Cunningham nor Lakin, consider alone or in combination, describes nor suggests a hub including a spring member configured to allow the hub to expand around an output shaft. Rather, Cunningham merely describes a rubbing seal and an end cap. The rubbing seal engages a shaft. In order to prolong the life of the rubbing seal, lubricant may be placed between the seal and the face of the end cap. Lakin describes a self-aligning bearing and end shield mount including a spring. The spring has an outer ring that concentrically surrounds the hub. Notably, neither Cunningham nor Lakin describes or suggests a spring member configured to allow the hub to expand around the

shaft. Accordingly, for at least the reasons set forth above, Claim 11 is respectfully submitted to be patentable over Cunningham, in further view of Lakin.

Claim 18 depends from independent Claim 11. When the recitations of Claim 18 are considered in combination with the recitations of Claim 11, Applicants submit that the dependent claim 18 likewise is patentable over Cunningham, in further view of Lakin.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



Jay J. Hoette

Registration No. 50,666

ARMSTRONG TEASDALE LLP

One Metropolitan Square, Suite 2600

St. Louis, Missouri 63102-2740

(314) 621-5070